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PRESENT OUTDOOR RECREATION PURSUITS IN RELATION
TO PAST OUTDOOR RECREATION PURSUITS
OF OLDER ADULTS

By

Gerald L. Bachmann

B.S., University of Nebraska, 1972

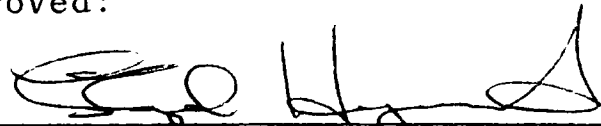
Presented in partial fulfillment of
the requirements for the degree of

Master of Science

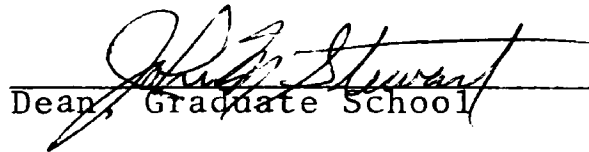
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ABSTRACT

Bachmann, Gerald L., M.S., Fall, 1976

Recreation

Present Outdoor Recreation Pursuits in Relation to Past Outdoor Recreation Pursuits of Older Adults (68 pp.)

Director: Dr. Lloyd A. Heywood

The problem in this study was to examine outdoor recreation activities as pursued by individuals during the periods of childhood and adulthood and to determine if similar outdoor recreation involvement was continued as an older adult.

The major purposes were (1) to test for significant differences between outdoor recreation activities pursued during childhood and outdoor recreation activities presently pursued as an older adult; (2) to test for significant differences between outdoor recreation activities pursued during adulthood and outdoor recreation activities presently pursued as an older adult; and (3) to determine if a significant correlation existed between the number of outdoor recreation activities pursued in the past during childhood and adulthood and the number of outdoor recreation activities presently pursued as an older adult.

A self-administered questionnaire was used to obtain data relative to the hypotheses. Fifty retired individuals who were fifty-five years of age and older from Missoula County, Montana were randomly selected to participate in the study.

The following conclusions were drawn from the findings:

- (1) The outdoor activities pursued as a child and as an adult are similar to those now pursued as an older adult.
- (2) The number of activities pursued as a child and as an adult are similar to the number pursued as an older adult.
- (3) Older adults tended to narrow their selection of pursued outdoor recreation activities compared to the breadth of activities explored as a child and as an adult.
- (4) The outdoor activities pursued as a child and as an adult were more active than the outdoor recreational activities pursued as an older adult.

TABLE OF CONTENTS

ABSTRACT	ii
LIST OF TABLES	
ACKNOWLEDGMENTS	

Chapter

I	INTRODUCTION	1
	The Statement of the Problem	
	Need for the Study	
	Definitions of Terms	
	Delimitations	
	Limitations	
	Basic Assumptions	
II	REVIEW OF THE LITERATURE	10
	The Older Adult and Outdoor Recreation	
	Participation Patterns	
	The Value of Recreation to the Older Adult	
	Adult Carry Over of Childhood Recreational	
	Pursuits	
	Older Adult Carry Over of Adult Recreational	
	Pursuits	
	Older Adult Carry Over of Childhood	
	Recreational Pursuits	
III	PROCEDURES	24
IV	ANALYSIS OF DATA	28
	Description of the Respondents	
	Older Adult Carry Over of Childhood	
	Recreational Pursuits	
	Older Adult Carry Over of Adult Recreational	
	Pursuits	
	Comparison of Past and Present Outdoor	
	Recreational Pursuits	

V	SUMMARY, FINDINGS, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS	49
	Summary	
	Findings	
	Discussion	
	Conclusions	
	Recommendations	
	BIBLIOGRAPHY	58
	APPENDICES	62
	A - Recreation Activity Questionnaire	
	B - Statistical Formulas Used to Test Hypotheses	
	C - Random Distribution Map	

LIST OF TABLES

Table	Page
1. Distribution of Subjects According to Age and Sex	30
2. Distribution of Subjects According to Age and Marital Status	31
3. Highest Educational Level of the Respondents . .	32
4. Current Employment Status of the Respondents . .	33
5. Chi Square Scores and Percentage Analysis for Outdoor Recreation Activities Carried Over from Childhood to Older Adulthood	36
6. Chi Square Scores and Percentage Analysis for Outdoor Recreation Activities Carried Over from Adulthood to Older Adulthood	40
7. Correlation of the Number of Activities Pursued during Childhood/Older Adult Years	43
8. Correlation of the Number of Activities Pursued during Adulthood/Older Adult Years	45
9. Correlation of the Number of Activities Pursued during Childhood-Adulthood/Older Adult Years .	47

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The author wishes to express his sincere and loving appreciation to Marlene J. Bachmann, the author's wife, for her encouragement and never-ending understanding throughout the study.

The writer is indebted to the fifty older adults of Missoula County, Montana from whom the data was collected.

And finally the author wishes to dedicate this study to his mother, Dorothy T. Anderson, who passed away January 6, 1973, and to older Americans in hopes that they may have a more satisfying and fulfilling life.

"To know how to grow old is the master
work of wisdom, and one of the most
difficult chapters of living."

Charles Reed

CHAPTER I

INTRODUCTION

Recreational planning of programs and facilities should be done according to the needs and interests of an area or a community. This theoretical focus is guided by the social scientists' recognition that much of what occurs in adult life stems from participation in social form and social institutions during childhood, and from the transmission of values and attitudes of parents and other groups in which individuals are members (3:84). Past experiences in relation to recreation are important elements in an individual's background that may predispose one toward certain future action. This suggests that an individual's recreation pursuits during his childhood and adult years may carry over into his older adult recreation pursuits. However, it has not been verified as to what effect childhood recreation pursuits have on one's adult life or even how the recreation pursuits as an adult affect the recreation pursuits of an older adult.

A considerable amount of research on personal and social characteristics such as age, sex, marital status, stage of life cycle, income, residence and education as

determinants of participation in recreational activities has been accomplished (15), (25). But as Smith has indicated, even though approaching participation by means of social and personal characteristics represents progress, it still is an "inadequate and unsatisfactory stopping point" (29:249).

According to Sofranko and Nolan, present and past situational determinants of recreational participation have been largely ignored (30:6-18). Thus, it seems evident that more research on the child's recreation activities, the adult's recreation activities and the older adult's recreation activities is needed. In our technological society and especially in the field of recreation, the older adults are often neglected. Programs for children and youth have been the center of attention while the older adult programs and recreational research for the older adult have been negligible.

The specific role that earlier life outdoor recreation pursuits in childhood and/or adulthood have on the older adult's outdoor recreation pursuits has not been studied. Vickery pointed out that the needs of older people have too long been ranked low in importance.

Ignoring their needs is no longer sound public policy in a nation whose population over sixty-five years of age will have increased from three million in 1900 to a projected twenty and eight-tenths million in the year 2000, half of whom will be more than seventy-two years old (32:21).

Bultena and Wood described evidence of a growing acceptance of a leisure life style by the elderly in our American society. "Although most older persons retire involuntarily (because of poor health or compulsory retirement rules), an increasing number are retiring in order to have more free time" (4:3).

These facts contribute to the importance of the principle that recreation programs must meet the needs and interests of the older adult, especially if the older adult is to find his life fulfilling after retirement from work. MacLean stated that the:

Advantaged, disadvantaged, rich, poor, acclaimed, or forgotten older Americans have a common base--a considerably enlarged block of leisure and very little education for its meaningful use, and if appetites are not whetted and skills are not taught early through family and school, few at 65 will be willing to try something entirely new. We need to inspire broad leisure choices and teach leisure skills to which the aged will return, when they finally find time (17:20, 40).

The Outdoor Recreation Resources Review Commission (ORRRC) Report #20, clearly indicated that once a person has acquired an experience with an activity, he is more likely than those who did not engage in that activity in their youth to continue in that activity as he grows older (19:23). Also Bultena and Wood supported the idea that earlier life styles do persist into old age, and that the active middle-aged man is likely to remain relatively active after retirement (4:12). By being introduced to a variety of leisure activity exper-

iences through a broad continuous education program at every level, a person may find it possible to face old age without boredom.

The Statement of the Problem

The specific purpose of this study was to examine outdoor recreation activities as pursued by individuals during the periods of childhood and adulthood and to determine if similar outdoor recreation involvement is continued as an older adult. With this objective in mind, the following hypotheses were tested:

Hypothesis I

There is no significant difference between outdoor recreation activities pursued during childhood and outdoor recreation activities presently pursued as an older adult.

Hypothesis II

There is no significant difference between outdoor recreation activities pursued during adulthood and outdoor recreation activities presently pursued as an older adult.

Hypothesis III

There is no significant correlation between the number of outdoor recreation activities pursued in the past during childhood and adulthood and the number of outdoor recreation activities presently pursued as an older adult.

Need for the Study

A significant point in planning recreation services for the elderly is that the aging population is increasing. Almost 15 percent of the older persons in the United States are over sixty-five.

Death rates have decreased markedly since the turn of the century, when the average length of life was only 47.3 years. By 1973, the average length of life had increased by about one-half to 71.3 years (14:1 2).

Thus, more individuals have more free time and ultimately more opportunities for leisure pursuits. This increased life span will provide additional time for individuals to re-engage in recreation activities of the past or to experience different activities complacent to their more recently newer interests. Free time may also give the older adult the opportunity to help their community and their fellow human beings, thereby helping to give them a sense of respectability and dignity.

Retirement for the aging person now occurs earlier than ever before. With increased longevity, the present average of fourteen years of retirement living is the equivalent of all the free hours available throughout the entire waking life of an individual. An analysis of activities that do carry over would help the recreation planner or programmer to prepare to meet the needs and interests of the older adult.

If the activities participated in during childhood

were carried over into adulthood and older adult years, the importance of education for leisure in the earlier years would be verified. Leisure education would help give an individual a broad knowledge of various recreation pursuits and a greater freedom of choice with this knowledge. The recreationist would be better prepared to meet the interests and needs of the participant of the future.

Information gained in this study may benefit the business employer and the retiree. If it is possible for businesses to investigate the retiree's past recreation experiences, they may be better able to encourage and help their employees to develop interests which would more adequately prepare them for mandatory retirement. Business and industry would be able to provide counsel and identify recreational pursuits of individuals.

If recreation activities do carry over to the older adult years, this study would be significant in forecasting future facility needs for adults and older adults of the future as well as for the people of today. It would also be possible for private and community outdoor recreation professionals to foresee future trends in recreation pursuits, thereby helping them to prepare to meet this challenge.

Definition of Terms

The following definitions were applicable in this

study:

Recreation Activity

Recreation activity is any activity pursued by an individual during his leisure time. The activity must be enjoyable and satisfying to one's needs and interests.

Outdoor Recreation Activity

Outdoor recreation activity includes the following: outdoor swimming or going to the beach, boating (canoeing, rafting, yachting, sailboating, kayaking), fishing (ice, fly or spin fishing), hunting (large or small game), skiing and other winter sports (ice skating, snow shoeing, snowmobiling, tobogganing, or sledding), hiking, driving for pleasure and sightseeing, camping (tent, bus, pickup, or Winnebago), horseback riding, picnicking, nature and bird walks, bicycling, walking for pleasure, motorcycling, croquet, shuffleboard, outdoor gardening, jogging, backpacking, tennis--badminton, golf, archery, and baseball or softball.

Childhood

Childhood is the life stage of an individual from birth to the age of eighteen.

Adulthood

Adulthood is the life stage of an individual from the age of nineteen up to and including fifty-four years of age.

Older Adult

Older adult is the life stage of an individual from fifty-five years of age and older.

Participant

A participant is an individual who engaged in an activity more than twice in one season.

Delimitations

This study was delimited to the following extent:

1. The questionnaire included twenty-three specified outdoor recreation activities.

2. A random sample of 1.3 percent ($N = 50$) of the individuals listed as retired in the 1973 Polk's Missoula City Directory, Missoula County, Montana was surveyed in this study.

Limitations

The limitations inferent in this study included the following:

1. It was recognized that the individual's capability to recall past outdoor recreation activities participated in during childhood and during the adult years of his life may have affected the results of this inquiry. Whenever recall is the basis for collecting data on the past, one must consider the complete accuracy of the memory of the respondent.

2. Mental and physical health factors or other factors which may limit the outdoor recreation activities pursued by an individual during one's life cycle were not examined.

3. As the 1973 Polk's Missoula City Directory was one year old, it was realized that it may not have been current or completely inclusive, thus eliminating some residents from the survey sample.

Basic Assumptions

For this study it was assumed that respondents would be able to recall outdoor recreation activities of their childhood and adulthood and would honestly report them in the study. Also it was assumed that an instrument could be developed to identify outdoor recreation activities of an individual during childhood, adulthood, and the older adult stages of life.

CHAPTER II

REVIEW OF THE LITERATURE

The Older Adult and Outdoor Recreation Participation Patterns

Participation in outdoor recreation activities by the older adult is affected by a number of problems of the past, present and future.

In the last sixty years, the composition of our society has undergone a revolution, which was at first gradual, then accelerated. Since 1900, the numbers of aged in the United States more than quadrupled, while the rest of the population only doubled. Social, economic, technological and scientific development have created changes that demand drastic adjustments in the lives of those who are over 65 years of age (7:479).

This trend will continue according to the population predictions made by the Department of Health, Education and Welfare. The Department forecasts that in the forty years between 1960 and 2000 the aged population will more than double in numbers (24:9). The "average life expectancy at birth has increased by more than twenty years for women and seventeen for men in a period of the last fifty years" (7:479). These facts indicate that more people are, and will be, living more years during their retirement. An opportunity exists for recreational professionals to help provide for their interests and needs.

Carlson, Deppe and MacLean, also pointed out that:

Our present system of compulsory retirement, without careful regard to economic need, physical ability, mental acumen or education for the use of leisure, carries with it a psychological impact for which few retirees are prepared (7:480).

Economically, many older adults are living on reduced or fixed incomes. The cost of living continues to rise, but their incomes do not increase accordingly. Thus, this reduced income must be used for the bare necessities in order to survive. The economic impact can and does affect outdoor recreation participation.

A tendency for participation to rise from the lowest income to the \$7500-\$10,000 income appears. The very low participation by the bottom income group can be accounted for in the past by relatively high proportion of older adults within the group (19:16, 25).

Under conditions of being just barely able to meet the cost of providing the necessities of life, the cost of transportation to and from leisure activities could deny participation to many older adults.

In our society, the role and the status of an individual changes as he grows older. The prestige of the older adults have decreased, while their numbers have increased.

The use of age as a reference point for establishing status is almost universal. The lack of a precise role to play, sudden retirement from the satisfying functions of an occupation, relaxing of ties with the death of a spouse or the mobility of children, and the indecision concerning the use of increased leisure all bring psychological effects that may be devastating (7:480).

If the sense of being needed and the feeling of being useful

is taken from the older adult, he may partially or totally disengage from society. The excuse for not participating in an activity is now, "I'm too old."

The perspective of ambition, interests and aspirations become foreshortened and the forces of motivation are weakened, when the future promises an ever decreasing resource of time and energy for achievement (11:50).

The ORRRC Report #20 indicated that of all the factors analyzed regarding participation in outdoor recreation activities, age was the most significant factor. Decline in participation seemed to accelerate in the highest age group. The sharpest drop in mean activity score occurred both for men and women between the ages of 55 to 64 and the 65 and over age groups. All the activities followed the overall pattern of a continuously decreasing participation with age (19). Vickery believes that in spite of the fact that the rocking chair concept of old age may well have disappeared by the beginning of the twenty-first century, people still will spend too much of their leisure time just sitting idle. Maintaining health and vigor becomes a problem in later maturity, especially in problem situations in which diet may be faulty and opportunity or stimulation for healthful exercise may be at a minimum (32).

Physical difficulties occur at a more rapid rate than in youth. Susceptability to mental illness may increase because of organic difficulties or psychological maladjustment resulting from loss of sight or hearing or the decline of meaningful social roles (7:482).

Education has had its affect on the older adult in preference to leisure time and what to do with it. Educational level shows a strong parallel to participation in outdoor recreation activities. Generally, the higher the educational training, the greater the participation. However, men with a college education participated less than men who were high school graduates. "Those of minimal education in our society tend to be the older people who are very low participators in outdoor activities. Also, those of lower education are represented in the lower income groups" (19:29). Lack of facilities, place of residence and availability of transportation are additional problem factors of the older adult concerning participation in outdoor recreation activity pursuits. The energy crisis of the 1970s may add to the increasing problem of transportation. A challenge awaits recreation professionals to overcome these problems to help provide more for the needs and interests of the older adult. A means must be found to re-engage older adults in our society instead of disengaging them, which is a detriment to our whole society.

The Value of Recreation to the Older Adult

Many older adults still believe that the Puritan work ethic is the director of their life styles. In the past a person was only entitled to play after work was finished, and in those days work lasted sixteen or more

hours per day. Today, evidence of a growing acceptance of a leisure life style by people in American society continues to accumulate. Shanas and others indicated that a new leisure class made up of retired men who enjoy being retired may be developing among the elderly in the United States (26).

Recreation can and does play an important part in an older adult's life. Recreation benefits are numerous. Initially, it contributes to human happiness. A study by Wood, Wylie and Sheafor found that those who were most involved in leisure activities tended to be the persons with the more favorable outlook on their life (34). Secondly, recreation provides the opportunity to achieve better coordination and motor development. Meyer, Brightbill and Sessoms stated that, "It becomes the opportunity for developing one's muscles, for stimulating the circulatory system, for increasing respiratory capacity, for aiding the digestive system and for helping improve the nervous system" (18:41). The total effect is that an individual will feel better. According to Simonson:

It's common logic if one feels better, his attitude towards others will be more congenial. When one is in a cordial, happy frame of mind, he will be more likely to make wiser decisions and his own world in general will look better (28:16).

Thirdly, recreation offers an opportunity for creative expression for individual urges, drives and hungers. "Recreation makes it possible to exercise our creative talents in

countless ways--not only in the arts and crafts, but in motor expression and communication" (18:39). Fourth, it is a socializing force, as it helps to create a sense of integration among individuals and groups. Meyer, Brightbill and Sessoms indicate that "It provides the chance for people to develop good habits--integrity, honesty, and reliability, and perhaps such qualities as unselfishness, courtesy, friendliness and courage" (18:39-40). These same authors also point out that one of the major benefits of recreation is the opportunities it opens for expressing social interests. Fifth, recreation makes a significant contribution to mental and emotional health by providing a balance and a release for frustrations throughout life. It has been shown by DeCarlo that regular participation is more closely associated with the successful aging criteria than sporadic participation, and that regular high activity participants showed higher mean successful aging scores than did their sporadic low activity counterparts (10). This suggests that a positive relationship between continual participation in social activity and successful aging exists. Another important benefit is that "Recreation is often the chief form of relaxation for both young and old" (18:42). These findings support the importance of balancing recreation with work, rest, and one's spiritual needs.

Adult Carry Over of Childhood
Recreational Pursuits

Prendergast, Nash, and Shumard gave support to the concept that the recreational enjoyment of later years was dependent on one's preparation or interest in earlier life (23), (20), (27). This viewpoint has been applied in the field of vocational counseling for young people. An example of this is the Vocational Interest Blank developed by Strong (31) and the Kuder Preference Test (16). A review of literature relating to recreational pursuits of individuals revealed that recreational activities participated in during childhood did tend to carry over into adulthood. However, only a limited amount of recreation research completes the continuum of an individual's life span, such as his childhood, adulthood and older adult recreational pursuits.

An early study in 1945 of 120 adults between the ages of twenty to thirty years compared present indoor and outdoor leisure time activities with those pursued during childhood. The results of the study indicated that adult leisure time activities did not highly correlate with those of childhood (21). However, in a study of eighty-eight members of the faculty of Langstrom University, it was disclosed that the family, during childhood, played a major part in the development of interests in all leisure time activities (33:368-369).

Agin cited studies which indicated the positive

relationships of early vocational interests of a child to the vocational interests of an adult as the basis for her research on the influence of childhood interests on adult recreation. The study included forty-five housewives, who resided in the greater Los Angeles area ranging in age from thirty to fifty years. The areas of recreation included in the study were aquatics, arts and crafts, dance, drama, sports, games, literary, mechanical, music, outdoors and social activities. Using a rank order analysis of the childhood and adulthood recreation interests, the results were:

1. Educational level had no effect on the recreation interests of the individuals.
2. A greater variety of recreation interests existed in childhood than did in the adult recreation interests.
3. Most adults were participants rather than spectators in aquatics, arts and crafts, sports, games, mechanics, outdoors and social activities, while more adults were spectators in the areas of dance, drama, literary, and music.
4. Four of the eleven interest areas indicated that individuals do tend to develop feelings about recreation interests as children and that these interests carry over into adulthood, while seven of the recreation interest

areas indicated no such carry over of activities to adulthood (1:25-35).

In a comparison study of three types of campers, roadside, remote and combination campers in the Three Sisters Wilderness Area of Oregon and adjacent areas, the remote and combination campers tended to continue the same style of camping as experienced in childhood. In their analysis, Burch and Wenger stated that, "Activities pleasantly familiar to a person in his childhood tend to attract his leisure time activities attention as an adult" (5:18). This conclusion was also supported by a study by Hendee, in which it was indicated that activities learned and pleasantly associated with during youth tend to be attractive during an individual's mature years (13).

Sofranko and Nolan studied early life experiences and adult sport participation in hunting and fishing. Their findings supported the theory that frequent hunting and fishing participation as a youth was associated with high levels of adult sport participation (30).

Citing the decline of the value of the "Protestant work ethic," Yoesting and Burkhead examined the impact of a recreational activity of a child on the leisure activity level of an adult in a rural population area. The 137 respondents, aged twenty or older, were asked to recall thirty-five outdoor recreation activities that they participated in during the ages of six to eleven, twelve to

seventeen, and presently. Forty percent of the thirty-five activities were participated in during childhood and adult life. It was concluded that further study is needed to develop a useful tool for prediction of outdoor recreation demands (35).

Older Adult Carry Over of Adult Recreational Pursuits

Baley believed that few studies had emphasized the establishment of health and recreational habits, which would sustain an individual's mental and physical health status at a high level until a relatively advanced age. In his study, three thousand men residing in six cities responded to a questionnaire covering sixty-seven activities. Also through interviews of retired and middle-aged men regarding their leisure time and recreational interests and problems, he discovered that recreational habits of younger men do not differ greatly in kind from those of older men (2).

Campbell also felt that little emphasis had been directed to the establishment of health and recreation habits, which he felt would sustain an individual's mental and physical health status at a high level. He theorized that, "Since man is a creature of habits, the way a person spends his leisure time may be determined by habit. Thus, how a man uses his leisure time at age thirty, may be a factor in determining how he will use his leisure time at

age 45 or at age 65" (6:267). An inventory was conducted to measure certain configurations of leisure behavior. The inventory of seventy recreation activities was mailed to 120 males, who were randomly selected from the city directory of Austin, Texas. Seventy-five persons completed and returned the inventory. A significant difference existed between the age groups of the respondents. The investigation concluded that:

Man's leisure activities change as he advances in years and with an ever increasing number of elderly persons in society and with ever increasing medical knowledge of how to preserve this population, some emphasis might be directed to the development of leisure time and recreation habits, which would contribute to and maintain an individual's mental and physical health at a high level (6:268).

A study which analyzed the recreational activities of retired adults was based on the theory that individuals are becoming more oriented toward the enjoyment of leisure time. Bultena and Wood interviewed 322 retired men residing in retirement communities in Arizona. Their findings indicated that 53 percent assumed the position that older persons have earned the right to their leisure and should not feel obligated to become involved in community or service groups. More liberal or permissive attitudes toward the retirement role were held by these men than older people who had retired in their home communities. One-third of the subjects participated in four or more activities regularly. The persons who were most active in formal groups

in their home communities tended also to be those who were the most involved in recreational activities in the retirement community setting. The authors found that preretirement styles persist into old age and that the active aged man is likely to remain active after retirement. However, Bultena and Wood also suggested that the leisure life styles of the retirement communities were compatible with the orientations of most older persons entering these places, and that retirement in their home communities exerted greater exposure to social norms which reaffirm the value of work and the importance of older persons remaining active in instrumental or productive roles (4).

Older Adult Carry Over of Childhood Recreational Pursuits

Nash found in an analysis of one thousand individuals aged four to eighty that in their use of leisure time, approximately 60 percent of their interests were acquired below the age of ten, and over 70 percent started their interests below the age of twelve. Approximately 20 percent began their leisure time activities between the ages of twelve and twenty-one, while 5 percent acquired their interests after age twenty-one. Thus, Nash concluded that "youth is the time to lay down the basic behavior pattern and to learn the skills that will last a lifetime" (20:15).

The ORRRC Report investigated factors that were most

relevant in projecting future demand for outdoor recreation. The total sample in the study equaled 2,750 cases, which represented a cross section of heads of household and their spouses. The study was primarily concerned with the participation in outdoor recreation by adults. A comparison of the outdoor recreation activities indicated that once individuals acquired experience with an activity, they were more likely to continue the activity as they grew older than those people who did not engage in the activity in their youth (19).

Cunningham and his associates completed a descriptive study of the frequency of participation in active leisure activities among males aged sixteen to sixty-nine living in Tecumseh, Michigan. The data was collected in 1962 and 1965. The health history of each person was updated during this period and the physical activity recall record was administered to all males who were not attending school. The activity recall included both occupational and active leisure time pursuits. This study analyzed thirty-three leisure time activities of the individuals. The age groups in the study were sixteen to twenty-nine, thirty to thirty-nine, forty to forty-nine, fifty to fifty-nine, and sixty to sixty-nine years of age. The results indicated little change in the activities in which the subjects participated from one age group to the next age group. The greatest changes occurred between the fifty to fifty-nine age group and those in the sixty to sixty-nine age group (9).

DeCarlo completed a secondary analysis of current and retrospective data from a twenty-year study of twins employing sixty male and female subjects. The mean age of the subjects was 85.5 years. Current data included an evaluation of the twins' successful aging, whose criteria included physical and mental health and intellectual performance. Current and retrospective data were employed to assess the subjects' recreative pursuits. The activities were differentiated as sensory-motor, cognitive, or affective. A recreative activity schedule classified data by life stage and frequency of participation. The age stages in the study were childhood (twelve to twenty years), young adulthood (twenty-one to thirty-nine years), middle age (forty to fifty-nine years), later life (sixty years and above), and current (the age of the subjects when the final phase of the testing was administered). The results indicated a significant relationship between recreative involvement and successful aging. Cognitive activity and intellectual performance demonstrated the highest relationship, while motor activity did not significantly relate to physical health. A high degree of activity with regularity was more highly correlated to successful aging than was sporadic activity of a low degree (10).

CHAPTER III

PROCEDURES

The application of the descriptive method of research was basic in this study. Techniques utilized included the development of a questionnaire, and an orderly collection, analysis, interpretation, and report of the data tabulated from this study.

In order to gather the necessary information, a questionnaire was devised that identified outdoor recreation pursuits of older adults during periods of childhood and adulthood and the current outdoor recreation pursuits in which older adults presently engage. The questionnaire (appendix A) was used in gathering the needed information regarding each individual. Questions which related to age, sex, marital status, educational level, and employment status were included in the questionnaire in order to provide an instruction of the respondents in this study.

The questionnaire was divided into three sections. Section I pertained to outdoor recreation pursuits engaged in as an older adult. The purpose of this segment of the questionnaire was to determine in which outdoor recreation pursuits the older adults were currently participating more

than twice in one season. Section II covered the outdoor recreation pursuits engaged in as an adult. The individual recalled outdoor recreation pursuits in which he participated during the ages of nineteen to fifty-four. Section III covered the recall of outdoor recreation pursuits engaged in as a child, during the ages of birth to eighteen years of age. Each section included the same list of twenty-three outdoor recreation activities that one might have pursued during childhood, during adulthood and as an older adult.

After the questionnaire was devised, a pretest of the questionnaire was administered to a group of five older adults in the city of Missoula, Montana. The major purposes of the pilot study were (1) to help determine the average length of time it would take to complete the questionnaire, (2) to determine if any questions were ambiguous or difficult to understand, and (3) to establish proper personal interview techniques. No revisions were made.

A 1.3 percent ($N = 50$) sample of the 4,441 individuals who were fifty-five years of age and who were listed as retired (Rtd.) in the 1973 Polk's Missoula City Directory, Missoula County, Missoula, Montana was randomly selected for this study. A table of random numbers was used to determine the sample (8:260-262).

The questionnaire was then administered by personal interview to the fifty retirees. If the subject either refused to be interviewed, had moved, or was deceased, a new

random number was selected.

The data in this study was analyzed at the .05 level of significance. The hypotheses were analyzed in the following manner. For hypothesis one, Chi Square analysis (appendix B) was used to determine if significant differences existed between outdoor recreation activities pursued during childhood and outdoor recreation activities presently pursued as an older adult.

For the second hypothesis, Chi Square analysis was used to determine if significant differences existed between outdoor recreation activities pursued during adulthood and outdoor recreation activities presently pursued as an older adult.

Chi Square statistic is known as a nonparametric or distribution-free statistic, which means that a sample is not required to be a normal distribution of the population. Chi Square can be used with discrete data, which can only be expressed in whole units, or with continuous data, which have varying degrees of measurements. Chi Square is useful for testing hypotheses concerned with significance of differences. It is a measure of squared deviations between observed and theoretical numbers in terms of frequencies in categories. Chi Square determines if these deviations are due to sampling error or some interdependence or correlation among the frequencies (12:196-205).

For hypothesis number three, Pearson's r (appendix B) was used to determine if significant correlation existed between the number of outdoor recreation activities pursued in the past during childhood and adulthood and the number of outdoor recreation activities presently pursued as an older adult. This correlation analysis compared (1) the number of outdoor recreation activities pursued during childhood with those presently pursued as an older adult, (2) the number of outdoor recreation activities pursued as an adult with those presently pursued as an older adult, and (3) the number of outdoor recreation activities pursued as a child and as an adult with the number presently pursued as an older adult.

CHAPTER IV

ANALYSIS OF DATA

The data of this study were compiled from information gathered by a questionnaire administered through personal interview. The questionnaire identified outdoor recreational activities pursued by the older adult during periods of childhood and adulthood, and also the current outdoor recreational pursuits in which an older adult was engaged. The questionnaire was divided into three sections. Section I dealt with outdoor recreation pursuits that the older adult currently participated in more than twice in one season. Section II covered the outdoor recreation pursuits engaged in as an adult, which included the outdoor recreation pursuits participated in during the ages of nineteen to fifty-four. Section III covered the outdoor recreation pursuits that an individual participated in during the ages of birth to eighteen years of age. Each contained the same list of twenty-three outdoor recreation activities.

Description of the Respondents

A 1.3 percent (N = 50) sample of 4,441 individuals who were fifty-five years of age or older, and who were

listed as retired (Rtd.) in the 1973 Polk's Missoula City Directory, Missoula County, Missoula, Montana were randomly selected for this study. A table of random numbers was used to select the sample. A map (appendix C) is included showing the sample distribution of respondents in the city of Missoula. The questionnaire was administered through personal interview to fifty retirees. The subjects were described according to the characteristics of age, sex, marital status, educational level and current employment status to determine the similarities or differences of their characteristics within and between the group.

The percentage of older adult men in the study equaled 44.0 percent compared to 56.0 percent older adult women. Twenty-two percent of the men were in the age category of sixty-six to seventy years of age, while the largest percent of the women, 20.0 percent, were sixty-one to sixty-five years of age. In addition, 18.0 percent of the women were in the sixty to sixty-six age group. Table 1 shows the distribution of the subjects according to age and sex.

No attempt was made in this study to determine if the respondents had been previously married, divorced or widowed. Only their present marital status was recorded. Twenty-seven, 54 percent, of the respondents were married. Of these, eleven, or 22 percent, were sixty-six to seventy years of age. Twenty-one, or 42 percent, were widowed and nine of the widowed, 18 percent, were sixty-six to seventy

TABLE 1
DISTRIBUTION OF SUBJECTS ACCORDING TO AGE AND SEX

Age	M A L E S		F E M A L E S	
	N	percent of sample	N	percent of sample
55-60	3	6.0	3	6.0
61-65	3	6.0	10	20.0
66-70	11	22.0	9	18.0
71-75	3	6.0	4	8.0
75+	2	4.0	2	4.0
Total	22	44.0*	28	56.0*

*Percentages vary slightly due to rounding of numbers.

years of age. There were none who were divorced and only two, or 4 percent, indicated they were single. Both of these were in the fifty-five to sixty year age group. Table 2 shows the distribution of subjects according to age and marital status.

Subjects participating in the study were primarily of the elementary and secondary education levels. Twenty-one, 42 percent, had completed schooling between the first and eighth grade, while twenty, 40 percent, had nine to twelve years of education. Nine, or 18 percent, of the subjects had attained a college education. None of the respondents in the study had received any graduate education.

TABLE 2

DISTRIBUTION OF SUBJECTS ACCORDING TO AGE AND MARITAL STATUS

Age	Married		Widowed		Single	
	N	% of sample	N	% of sample	N	% of sample
55-60	4	8.0			2	4.0
61-65	8	16.0	5	10.0		
66-70	11	22.0	9	18.0		
71-75	2	4.0	5	10.0		
75+	2	4.0	2	4.0		
Total	27	54.0	21	42.0	2	4.0

Table 3 indicates the highest educational level attained by the subjects in the study.

Forty-seven, or 94 percent, of the subjects were fully retired. Twenty, or 40 percent, of the sample were between the ages of sixty-six to seventy years. Only one person was considered to be employed full-time, while two were employed part-time. Table 4 shows the current employment status of the subjects.

Older Adult Carry Over of Childhood
Recreational Pursuits

The first hypothesis stated that there is no significant difference between outdoor recreation activities pursued

TABLE 3
HIGHEST EDUCATIONAL LEVEL OF THE RESPONDENTS

Educational Level Attained	A G E											
	55-60		60-65		66-70		71-75		75+		Combined	
	N	%	N	%	N	%	N	%	N	%	N	%
First-Eighth	1	2.0	5	10.0	11	22.0	3	6.0	1	2.0	21	42.0
Ninth-Twelfth	4	8.0	7	14.0	5	10.0	3	6.0	1	2.0	20	40.0
College or Vocational	1	2.0	1	2.0	4	8.0	1	2.0	2	4.0	9	18.0
Total	6	12.0	13	26.0	20	40.0	7	14.0	4	8.0	50	100.0

TABLE 4
CURRENT EMPLOYMENT STATUS OF RESPONDENTS

Age	Full-time Employed		Part-time Employed		Fully Retired	
	N	Percent	N	Percent	N	Percent
55-60	1	2.0	1	2.0	4	8.0
61-65			1	2.0	12	24.0
66-70					20	40.0
71-75					7	14.0
75+					4	8.0
Total	1	2.0	2	4.0	47	94.0

during childhood and outdoor recreation activities presently pursued as an older adult. The Chi Square analysis with Yates' Correction formula was used in testing this hypothesis at the .05 level of significance.

Whenever one of the "yes-no" frequencies was small (less than 10), the computed Chi Square was likely to be an over-estimate. Chi Square with Yates' Correction formula for continuity was applied to correct for this over-estimation (12:196-205).

There were no significant differences in twelve of the outdoor recreation activities pursued during childhood compared with those same activities pursued during older adulthood. These activities were boating, fishing, driving

for pleasure, nature and bird walks, walking for pleasure, motorcycling, shuffleboard, outdoor gardening, jogging, backpacking, golf, and archery.

Statistically significant differences were found in eleven of the outdoor recreation activities pursued during childhood compared with those pursued during older adulthood. These activities were outdoor swimming or going to the beach, hunting, skiing and other winter sports, hiking, camping, horseback riding, picnicking, bicycling, croquet, tennis or badminton, and baseball or softball.

The most pursued present outdoor recreation activities were walking for pleasure, 88 percent ($N = 44$), driving for pleasure and sightseeing, 86 percent ($N = 43$), picnicking, 84 percent ($N = 42$), and outdoor gardening, 80 percent ($N = 40$). Skiing and other winter sports and jogging were not presently pursued by any of the older adults. Other outdoor recreation activities with only one or two older adult participants included backpacking, 2 percent ($N = 1$), archery, 2 percent ($N = 1$), horseback riding, 2 percent ($N = 1$), motorcycling, 4 percent ($N = 2$), and shuffleboard, 4 percent ($N = 2$).

Responses regarding involvement in childhood outdoor recreation pursuits indicated a greater number of respondents engaged more as a child in all but one outdoor recreation activity. Walking for pleasure was the only activity pursued more by older adults than in childhood. The most pursued outdoor recreation activities were picnicking, 100 percent

(N = 50), driving for pleasure, 94 percent (N = 47), outdoor gardening, 94 percent (N = 47), walking for pleasure, 86 percent (N = 43), and fishing, 78 percent (N = 39). Those pursued the least during childhood were shuffleboard, 4 percent (N = 2), motorcycling, 4 percent (N = 2), archery, 8 percent (N = 4), and jogging, 10 percent (N = 5). Chi Square scores and percentage analysis of the outdoor recreation activities of older adults which carried over from childhood to older adulthood are shown in table 5.

Older Adult Carry Over of Adult Recreational Pursuits

The second hypothesis stated that there is no significant difference between outdoor recreation activities pursued during adulthood and outdoor recreation activities presently pursued as an older adult. The Chi Square analysis with Yates' Correction formula was used in testing this hypothesis at the .05 level of significance.

There were no significant differences for eleven of the outdoor recreation activities pursued during adulthood compared with those recreation activities during older adulthood. These activities were boating, hiking, driving for pleasure and sightseeing, nature and bird walks, walking for pleasure, motorcycling, shuffleboard, jogging, backpacking, golf, and archery.

Statistically significant differences were found in

TABLE 5

CHI SQUARE SCORES AND PERCENTAGE ANALYSIS FOR OUTDOOR
RECREATION ACTIVITIES CARRIED OVER FROM
CHILDHOOD TO OLDER ADULTHOOD

Activity	Childhood Participants		Older Adult Participants		χ^2 Value ^a
	N	%	N	%	
1. Outdoor swimming or going to the beach	27	54.0	3	6.0	25.190*
2. Boating	12	24.0	8	16.0	.536
3. Fishing	39	78.0	30	60.0	3.786
4. Hunting	20	40.0	6	12.0	8.784*
5. Skiing & other winter sports	34	68.0	0	0.0	48.529*
6. Hiking	33	66.0	19	38.0	7.852*
7. Driving for pleasure and sightseeing	47	94.0	43	86.0	1.000
8. Camping	29	58.0	16	32.0	6.828*
9. Horseback riding	23	46.0	1	2.0	24.178*
10. Picnicking	50	100.0	42	84.0	6.658*
11. Nature & bird walks	19	38.0	15	30.0	.713
12. Bicycling	23	46.0	6	12.0	12.433*
13. Walking for pleasure	43	86.0	44	88.0	.000
14. Motorcycling	2	4.0	2	4.0	.260

TABLE 5-Continued

Activity	Childhood Participants		Older Adult Participants		χ^2 Value ^a
	N	%	N	%	
15. Croquet	22	44.0	8	16.0	8.048*
16. Shuffleboard	2	4.0	2	4.0	.260
17. Outdoor gardening	47	94.0	40	80.0	3.183
18. Jogging	5	10.0	0	0.0	3.368
19. Backpacking	6	12.0	1	2.0	2.458
20. Tennis-badminton	14	28.0	3	6.0	7.087*
21. Golf	14	28.0	8	16.0	1.002
22. Archery	4	8.0	1	2.0	.842
23. Baseball-softball	39	78.0	3	6.0	50.287*

^aThe .05 level of significance = 3.841.

*Indicates rejection of Hypothesis I.

twelve of the outdoor recreation activities pursued during adulthood compared with those recreation activities during older adulthood. These activities were outdoor swimming or going to the beach, hunting, skiing and other winter sports, hiking, camping, horseback riding, picnicking, bicycling, croquet, outdoor gardening, tennis or badminton, and baseball or softball.

The more-pursued present outdoor recreation activities by older adults were: walking for pleasure, 88 percent (N = 44), driving for pleasure and sightseeing, 86 percent (N = 43), picnicking, 84 percent (N = 42), and outdoor gardening, 80 percent (N = 40). No one pursued skiing and other winter sports or jogging. Outdoor recreational activities with only one or two older adult participants included archery, 2 percent (N = 1), horseback riding, 2 percent (N = 1), backpacking, 2 percent (N = 1), motorcycling, 4 percent (N = 2), and shuffleboard, 4 percent (N = 2).

The most pursued outdoor recreation activities by adults were picnicking, 100 percent (N = 50), outdoor gardening, 96 percent (N = 48), driving for pleasure and sightseeing, 94 percent (N = 47), walking for pleasure, 92 percent (N = 46), and fishing, 82 percent (N = 41). Those pursued the least during adulthood were jogging, 2 percent (N = 1), archery, 8 percent (N = 4), motorcycling, 8 percent (N = 4), and backpacking, 12 percent (N = 6). Chi Square scores and the percentage analysis for twenty-three outdoor

recreation activities which carried over from adulthood to older adulthood are shown in table 6.

Comparison of Past and Present Outdoor
Recreational Pursuits

The third hypothesis stated there is no significant correlation between the number of outdoor recreation activities pursued in the past during childhood and adulthood and the number of outdoor recreational activities presently pursued as an older adult. The Pearson Product Moment Correlation (r) analysis (appendix B) compared (1) the number of outdoor recreation activities pursued during childhood with those presently pursued as an older adult, (2) the number of outdoor recreation activities pursued during adulthood with those presently pursued as an older adult, and (3) the combination of childhood and adulthood outdoor recreation activities with the number of outdoor recreation activities presently pursued as an older adult.

"The size of the Pearson Product-Moment Correlation Coefficient (r) varies from +1 through 0 to 1. The absence of a relationship is denoted by a correlation coefficient of .00 or thereabout," (12:86). A correlation of .80 and above is considered a high coefficient, while an r near .50 is considered a moderate correlation and an r of .30 and below is considered a low correlation coefficient (12:101).

TABLE 6

CHI SQUARE SCORES AND PERCENTAGE ANALYSIS FOR OUTDOOR
RECREATION ACTIVITIES CARRIED OVER FROM
ADULTHOOD TO OLDER ADULTHOOD

Activity	Adult Participants		Older Adult Participants		χ^2 Value ^a
	N	%	N	%	
1. Outdoor swimming or going to the beach	28	56.0	3	6.0	26.928*
2. Boating	14	28.0	8	16.0	1.457
3. Fishing	41	82.0	30	60.0	4.857*
4. Hunting	21	42.0	6	12.0	9.944*
5. Skiing & other winter sports	29	58.0	0	0.0	38.007*
6. Hiking	18	36.0	19	38.0	.043
7. Driving for pleasure and sightseeing	47	94.0	43	86.0	1.000
8. Camping	29	58.0	16	32.0	6.828*
9. Horseback riding	16	32.0	1	2.0	13.891*
10. Picnicking	50	100.0	42	84.0	6.658*
11. Nature & bird walks	17	34.0	15	30.0	.046
12. Bicycling	21	42.0	6	12.0	9.944*
13. Walking for pleasure	46	92.0	44	88.0	.111
14. Motorcycling	4	8.0	2	4.0	.177

TABLE 6-Continued

Activity	Adult Participants		Older Adult Participants		χ^2 Value ^a
	N	%	N	%	
15. Croquet	26	52.0	8	16.0	12.879*
16. Shuffleboard	7	14.0	2	4.0	1.954
17. Outdoor gardening	48	96.0	40	80.0	4.640*
18. Jogging	1	2.0	0	0.0	.970
19. Backpacking	6	12.0	1	2.0	2.458
20. Tennis-badminton	14	28.0	3	6.0	7.087*
21. Golf	14	28.0	8	16.0	1.002
22. Archery	4	8.0	1	2.0	.842
23. Baseball-softball	33	66.0	3	6.0	50.287*

^aThe .05 level of significance = 3.841.

*Indicates rejection of Hypothesis II.

Childhood/Older Adult Correlation

There was a high correlation coefficient in existence between the number of outdoor recreational activities pursued during childhood and those activities presently engaged in by the older adult. The calculated Pearson r was .79. Data for the correlation of the number of activities pursued during childhood/older adult years is shown in table 7.

Adulthood/Older Adult Correlation

There was a high correlation coefficient in existence between the number of outdoor recreational activities pursued during adulthood and the number of outdoor recreational activities presently engaged in by the older adult. The calculated Pearson r was .84. Data for this correlation of the number of activities pursued during adulthood/older adult years is shown in table 8.

Childhood-Adulthood/Older Adult Correlation

There was a high correlation coefficient in existence between the number of outdoor recreational activities pursued during childhood and adulthood and the number of activities presently pursued as an older adult. The calculated Pearson r was .82. Data for the correlation of the number of activities pursued during childhood-adulthood/older adult years is shown in table 9.

TABLE 7

CORRELATION OF NUMBER OF ACTIVITIES PURSUED
DURING CHILDHOOD/OLDER ADULT YEARS

Activity	Childhood	Older Adult	X^2	Y^2	XY
	X	Y			
1. Outdoor swimming or going to the beach	27	3	729	9	81
2. Boating	12	8	144	64	96
3. Fishing	39	30	1521	900	1170
4. Hunting	20	6	400	36	120
5. Skiing & other winter sports	34	0	1156	0	0
6. Hiking	33	19	1089	361	627
7. Driving for pleasure and sightseeing	47	43	2209	1849	2021
8. Camping	29	16	841	256	464
9. Horseback riding	23	1	529	1	23
10. Picnicking	50	42	2500	1764	2100
11. Nature & bird walks	19	15	361	225	285
12. Bicycling	23	6	529	36	138
13. Walking for pleasure	43	44	1849	1936	1892
14. Motorcycling	2	2	4	4	4
15. Croquet	22	8	484	64	176
16. Shuffleboard	2	2	4	4	4

TABLE 7-Continued

Activity	Childhood	Older Adult	X^2	Y^2	XY
	X	Y			
17. Outdoor gardening	47	40	2209	1600	1880
18. Jogging	5	0	25	0	0
19. Backpacking	6	1	36	1	6
20. Tennis-badminton	14	3	196	9	42
21. Golf	14	8	196	64	112
22. Archery	4	1	16	1	4
23. Baseball-softball	39	3	1521	9	117
Totals	555	301	18548	9193	11362
$r = .79$					

TABLE 8

CORRELATION OF THE NUMBER OF ACTIVITIES PURSUED
DURING ADULTHOOD/OLDER ADULT YEARS

Activity	Adulthood	Older Adult	X^2	Y^2	XY
	X	Y			
1. Outdoor swimming or going to the beach	28	3	784	9	84
2. Boating	14	8	196	64	112
3. Fishing	41	30	1681	900	1230
4. Hunting	21	6	441	36	126
5. Skiing & other winter sports	29	0	841	0	0
6. Hiking	18	19	324	361	342
7. Driving for pleasure and sightseeing	47	43	2209	1849	2021
8. Camping	29	16	841	256	464
9. Horseback riding	16	1	256	1	16
10. Picnicking	50	42	2500	1764	2100
11. Nature & bird walks	17	15	289	225	255
12. Bicycling	21	6	441	36	126
13. Walking for pleasure	46	44	2116	1936	2024
14. Motorcycling	4	2	16	4	8
15. Croquet	26	8	676	64	208

TABLE 8-Continued

Activity	Adulthood	Older Adult	X^2	Y^2	XY
	X	Y			
16. Shuffleboard	7	2	49	4	14
17. Outdoor gardening	48	40	2304	1600	1920
18. Jogging	1	0	1	0	0
19. Backpacking	6	1	36	1	6
20. Tennis-badminton	14	3	196	9	42
21. Golf	14	8	196	64	112
22. Archery	4	1	16	1	4
23. Baseball-softball	33	3	1089	9	99
Totals	534	301	17498	9193	11313
$r = .836 (.84)$					

TABLE 9

CORRELATION OF THE NUMBER OF ACTIVITIES PURSUED
DURING CHILDHOOD-ADULTHOOD/OLDER ADULT YEARS

Activity	Childhood/ Adulthood	Older Adult	X^2	Y^2	XY
	X	Y			
1. Outdoor swimming or going to the beach	55	3	3025	9	165
2. Boating	26	8	676	64	208
3. Fishing	80	30	6400	900	2400
4. Hunting	41	6	1681	36	246
5. Skiing & other winter sports	63	0	3969	0	0
6. Hiking	51	19	2601	361	969
7. Driving for pleasure and sightseeing	94	43	8836	1849	4042
8. Camping	58	16	3364	256	928
9. Horseback riding	39	1	1521	1	39
10. Picnicking	100	42	10000	1764	4200
11. Nature & bird walks	36	15	1296	225	540
12. Bicycling	44	6	1936	36	264
13. Walking for pleasure	89	44	7921	1936	3916
14. Motorcycling	6	2	36	4	12
15. Croquet	48	8	2304	64	384

TABLE 9-Continued

Activity	Childhood/ Adulthood	Older Adult	X^2	Y^2	XY
	X	Y			
16. Shuffleboard	9	2	81	4	18
17. Outdoor gardening	95	40	9025	1600	3800
18. Jogging	6	0	36	0	0
19. Backpacking	12	1	144	1	12
20. Tennis-badminton	28	3	784	9	84
21. Golf	28	8	784	64	224
22. Archery	8	1	64	1	8
23. Baseball-softball	72	3	5184	9	216
Totals	1088	301	71688	9193	22675
$r = .819 (.82)$					

CHAPTER V

SUMMARY, FINDINGS, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The specific purpose of this study was to examine outdoor recreation activities as pursued by individuals during the periods of childhood and adulthood, and to determine if similar outdoor recreation involvement is continued as an older adult. With this objective, the following hypotheses were tested:

Hypothesis I

There is no significant difference between outdoor recreation activities pursued during childhood and outdoor recreation activities presently pursued as an older adult.

Hypothesis II

There is no significant difference between outdoor recreation activities pursued during adulthood and outdoor recreation activities presently pursued as an older adult.

Hypothesis III

There is no significant difference between the num-

ber of outdoor recreation activities pursued in the past during childhood and adulthood and the number of outdoor recreation activities presently pursued as an older adult.

All fifty subjects in the sample were listed as retired (Rtd.) in the 1973 Polk's Missoula City Directory, Missoula County, Missoula, Montana. They ranged in age from fifty-five years and older. All were residents of the city of Missoula, Montana or the immediate area.

The data were obtained from a questionnaire administered through personal interview. The questionnaire was divided into three sections. Section I determined outdoor recreational pursuits in which the older adults were currently participating more than twice in one season. Section II covered the outdoor recreation activities pursued as an adult, while Section III covered the outdoor recreation activities pursued during childhood. The questionnaire contained questions pertaining to age, sex, marital status, educational level, and employment status to analyze the nature of the respondents. The questionnaire was pretested with five individuals aged fifty-five and over, who were residents of Missoula County, Montana or the surrounding area.

The completed questionnaire was hand tabulated and the data were analyzed using the Chi Square analysis for testing hypotheses one and two. The Pearson Product Moment Correlation (r) statistic was used to test hypothesis three.

Findings

The principal findings of the study were as follows:

1. The hypothesis that there is no significant difference between outdoor recreation activities pursued during childhood and outdoor recreation activities presently pursued as an older adult was tested for significance by use of Chi Square analysis. It appeared that a significant relationship existed for twelve of the twenty-three outdoor recreation activities carried over from childhood. For example, as a total group, older adults reported that they were currently participating in 52.2 percent (N = 12) of the activities that they participated in as children. These activities included: boating, fishing, driving for pleasure and sightseeing, nature and bird walks, walking for pleasure, motorcycling, shuffleboard, outdoor gardening, jogging, backpacking, golf, and archery. Of the twenty-three outdoor recreation activities pursued as a child, 47.8 percent (N = 11) were not being engaged in presently by the older adult. These activities were: outdoor swimming or going to the beach, hunting, skiing and other winter sports, hiking, camping, horseback riding, picnicking, bicycling, croquet, tennis or badminton, and baseball or softball.

2. The hypothesis that there is no significant differences between outdoor recreation activities pursued during adulthood and outdoor recreation activities presently

pursued as an older adult was tested for significance by use of Chi Square analysis. It appeared that a significant relationship existed for eleven of the twenty-three outdoor recreation activities carried over from adulthood. For example, as a total group, older adults reported they were now participating in 47.8 percent ($N = 11$) of the outdoor recreation activities that they participated in as an adult. These activities included: boating, hiking, driving for pleasure and sightseeing, nature and bird walks, walking for pleasure, motorcycling, shuffleboard, jogging, backpacking, golf, and archery. Of the twenty-three outdoor recreation activities in which they were active as an adult 52.2 percent ($N = 12$), were not being engaged in presently by the older adult. These activities were: outdoor swimming or going to the beach, fishing, hunting, skiing and other winter sports, horseback riding, picnicking, bicycling, croquet, outdoor gardening, tennis or badminton, and baseball or softball.

3. The hypothesis that there is no significant correlation between the number of recreation activities pursued in the past, during childhood and adulthood with the number of outdoor recreation activities pursued as an older adult was tested for significance by use of Pearson r . A calculated correlation of .79 indicated that a high correlation existed between the number of activities during childhood and the number of activities presently pursued as an older

adult. A correlation of .836 was calculated for the number of outdoor recreation activities pursued during adulthood and the number of activities presently engaged in by the older adult. A correlation of .819 existed between the number of outdoor recreation activities pursued during childhood and adulthood and the number presently being pursued as an older adult.

Discussion

Prendergast, Nash and Shumard gave support to the concept that the recreational enjoyment of later years was dependent on one's preparation or interest in earlier life. The analysis of the present study indicated that twelve of the twenty-three outdoor recreation activities pursued during childhood were being pursued as an older adult. These twelve activities supported the null hypothesis and indicated that some activities do carry over throughout one's life stages. This study also revealed that eleven of the twenty-three outdoor recreation activities also carried over from adulthood to older adulthood. A greater participation rate was indicated for each outdoor recreation activity pursued during childhood and adulthood, than presently pursued as an older adult. This may indicate that as children and adults, the respondents participated and experimented with a multiplicity of outdoor recreation activities,

while the older adult has narrowed his preferences to participation in fewer and more select outdoor recreation activities.

Cummings and Henry proposed that the older adult moves into disengagement. The older individual disengages with advancing age from social relationships and active participation. Therefore through disengagement, the activity level of an individual tends to decrease with age. The results of this study did indicate that there was a move from active to more passive outdoor recreation activities, as an individual moved from childhood to adulthood to the older adulthood stage of life. Participation in vigorous outdoor activities declined between adulthood and the older adulthood period. Twenty-eight adults participated in swimming, but only three continued recreational swimming in older adulthood. Twenty-one adults bicycled, but only six of the older adults continued this activity. Thus, it seems that the older adults significantly decrease in their participation in active outdoor recreational activities as compared to their participation during adulthood. Factors such as lack of transportation, health, income, and education for leisure may contribute to the shift toward more passive activities in older adulthood.

The older adult has lived through changes in our social culture, that has moved from restraint in participation in recreation activities in freedom of enjoyment of

leisure time. The past era of the Puritan work ethic devalued the need and importance of leisure or recreation for an individual's well being. Input due to the lack of education for leisure and forced early retirement in our society, the older adult has not been adequately prepared for the large amount of free time that he has in today's world. In this study, 42 percent of the subjects had only an eighth-grade education. This reflected an era where children were often needed at home to work for the economic survival of the family. Probably very little, if any, instruction in use of leisure time was passed on during the older adult's early education. An example of an outdoor activity which did have a significant carry over from both the childhood and adulthood stages of life to older adulthood is outdoor gardening. This may be due, in part, to the Puritan work ethic of the past and also the current popularity in gardening and growing of plants. A comparison of the number of activities pursued by the older adult revealed moderate to high correlations indicating that the number of activities pursued does not significantly change in the older adult life cycle. Enjoyment and fulfillment of an individual's needs and interests are factors that influence participation in the number and carry over of an outdoor recreation activity.

Conclusions

On the basis of the data in this study, the following conclusions appear to be warranted:

1. The outdoor recreational activities pursued as a child and those pursued as an adult are similar to those activities now pursued as an older adult.

2. The outdoor activities pursued as a child and those pursued as an adult were more active than the outdoor recreational activities now pursued as an older adult.

3. The number of outdoor recreational activities pursued as a child and as an adult were similar to the number of activities now pursued as an older adult.

4. Older adults tended to narrow their selection of pursued outdoor activities compared to the breadth of activities explored as a child and as an adult.

Recommendations

This study was concerned with the outdoor recreation activities pursued during childhood and adulthood and an analysis was done to determine if those activities were now being pursued presently as an older adult. As a result of the findings, further study must be undertaken in the following areas:

1. An analysis of both indoor and outdoor recreation activities should be adopted to gain information regarding

other recreational activities, which carry over from past life stages.

2. A study which would involve a larger sampling of the population in Montana would be beneficial. The sample might be selected from a listing of older adults, who are members in an organized senior citizens' center in Montana.

3. Factors such as socioeconomic status, occupation, available transportation, past life styles, mental and physical health factors and their effects on recreation participation of the older adult would give a better understanding of the older American's activity involvement.

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A P P E N D I C E S

APPENDIX A

RECREATION ACTIVITY QUESTIONNAIRE

RECREATION ACTIVITY QUESTIONNAIRE

Name and Address _____
(or number)

<u>Age</u>	<u>Sex</u>	<u>Marital Status</u>
<input type="checkbox"/> 55-60	<input type="checkbox"/> Male	<input type="checkbox"/> Married
<input type="checkbox"/> 61-65	<input type="checkbox"/> Female	<input type="checkbox"/> Widowed
<input type="checkbox"/> 66-70		<input type="checkbox"/> Divorced
<input type="checkbox"/> 71-75		<input type="checkbox"/> Single
<input type="checkbox"/> 75+		

<u>Education</u>	<u>Employment Status</u>
<input type="checkbox"/> First-Eighth Grade	<input type="checkbox"/> Part-time Employment
<input type="checkbox"/> Ninth-Twelfth Grade	<input type="checkbox"/> Fully Retired
<input type="checkbox"/> College or other	
<input type="checkbox"/> Graduate School	

II. I'll read you a list of outdoor activities now. Would you please tell me if you participated in any one of these activities more than twice in one season.

Activity	Childhood		Adulthood		Older Adult	
	Yes	No	Yes	No	Yes	No
1. Outdoor swimming or going to the beach.						
2. Boating (canoeing, rafting, yachting, sailboating, kayaking)						
3. Fishing (ice, fly or spin fishing)						
4. Hunting (large or small game)						
5. Skiing & Other Winter Sports (ice skating, snow shoeing, snowmobiling, tobogganing, sledding)						

Activity	Childhood		Adulthood		Older Adult	
	Yes	No	Yes	No	Yes	No
6. Hiking						
7. Driving for pleasure and sightseeing						
8. Camping (tent, bus, pickup, Winnebago, etc.)						
9. Horseback riding						
10. Picnicking						
11. Nature & bird walks						
12. Bicycling						
13. Walking for pleasure						
14. Motorcycling						
15. Croquet						
16. Shuffleboard						
17. Outdoor gardening						
18. Jogging						
19. Backpacking						
20. Tennis-badminton						
21. Golf						
22. Archery						
23. Baseball-softball						
24. Other (specify)						

APPENDIX B

STATISTICAL FORMULAS USED TO TEST HYPOTHESES

Example of a Contingency Table for Chi Square Analysis

Hypothetical Responses for Hunting

	Yes	No	
Childhood	a	b	
	30	20	k 50
Older Adult	c	d	
	25	25	l 50
	m 55	n 45	100

Chi Square Formula with Yates' Correction for Testing Hypotheses I and II

$$\chi^2 = \frac{N \left(\frac{ad-bc}{(k)(l)(m)(n)} \right)^2}{\frac{N}{2}}$$

Pearson Product Moment Correlation Used to Test Hypothesis III

$$r = \frac{\sum XY - \frac{(\sum X)(\sum Y)}{N}}{\sqrt{\left(\sum X^2 - \frac{(\sum X)^2}{N} \right) \left(\sum Y^2 - \frac{(\sum Y)^2}{N} \right)}}$$

APPENDIX C

RANDOM DISTRIBUTION MAP

